

Dry Cleaner Reference Manual

Complying with Washington State and Federal Environmental Regulations



July 2001 Publication No. 01-04-018

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Prepared by: Washington State Department of Ecology

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Introduction

The purpose of this manual is to help dry cleaners understand and comply with state and federal environmental regulations. It is intended to be used as a desktop reference manual. It summarizes current requirements and recommendations for dry cleaners on dangerous waste management and disposal, sewer discharge, solid waste management and disposal, spill prevention and control, and general operating practices.

This manual does not include information on local regulations. Local authorities such as solid waste districts, county health departments, air pollution control agencies, and sewage treatment districts may have additional environmental requirements. A list of agencies to contact for technical assistance on requirements in your area is included. For more detailed information on topics included in this manual, contact your local office of Department of Ecology listed in Appendix A.1.3 of this manual. Regulations, publications, and other information from the Department of Ecology are also available on the Department's website at http://www.ecy.wa.gov/.

Section 1.0 Environmental Hazards

The main source of pollution from a dry cleaner is the solvent used in the cleaning process. In Washington, about 800 dry cleaners use perchloroethylene (PERC, also called tetrachlorethylene); about 50 use petroleum solvents. These are solvents that can affect human health and safety and the environment.

- ❖ PERC is a known cancer-causing chemical in animals, and may contribute to cancers in humans. In the workplace, air concentrations of PERC should not exceed 25 parts per million. In addition, spills and leaks can lead to PERC contamination of soil, surface water, and ground water.
- ❖ Petroleum solvents used in dry cleaning are "volatile organic compounds."
 When released to the environment in liquid form, petroleum solvents can contaminate soil, surface water, and ground water. When released into the air, they react with sunlight and contribute to smog.

Section 2.0 Required Operating Practices

Section 2.1 General Requirements

The following are requirements for PERC dry cleaners:

- ❖ File a Notice of Construction with your local air pollution control agency before adding or replacing dry cleaning equipment. Call your local air pollution control agency for more information about the Notice of Construction (see Appendix A.1.1 for listing).
- ❖ Determine whether you are a regulated dangerous waste generator or a small quantity dangerous waste generator (Section 3.3 Identify Your Generator Status). Follow the requirements for handling dangerous waste given in Section 3.0.
- ❖ Keep proper records and file required reports. See Section 8.0 Record Keeping and Reporting Requirements.
- ❖ Keep Material Safety Data Sheets (MSDS) on-site and readily accessible to employees and regulator inspectors for PERC, other solvents, detergents, and all other chemical supplies. Be sure to get these MSDS from your supplier.

Section 2.2 PERC Requirements

The following are requirements for all PERC dry cleaners. They are strongly recommended (where applicable) for dry cleaners using other solvents:

Equipment Installation, Use, Maintenance and Repair

- ❖ Transfer equipment: Do not install transfer equipment. You may continue to use transfer equipment installed before 9/21/93, unless you are located within the jurisdiction of the Puget Sound Clean Air Authority (see Appendix A.1.1).
- ❖ Leaks: Check equipment weekly for leaks, and keep records of any leaks and repairs. Order repair parts as soon as possible, and install them within five days of receipt. Vapor leaks around the door of dry cleaning equipment can sometimes be detected by running a finger or squirting a soapy solution along the door edge. However, an electronic halogen leak detector is more reliable.

If you repair equipment yourself, refer to the vendor, owner's manual, or manufacturer.

- ❖ **Design and operation specifications:** Keep design specifications and operating manuals on-site for all equipment and emissions control devices.
- ❖ Operation and maintenance: Operate and maintain equipment according to manufacturer's specifications and recommendations. At a minimum, follow the Recommended Maintenance Schedule for Dry Cleaners on page 35 as it applies to your equipment. For a detailed maintenance guide, call the U.S. Environmental Protection Agency (EPA) library, (919) 541-5514 and ask for EPA document 4531R-94-073, General Recommended Operating and Maintenance Practices for Dry Cleaning Equipment.

Record Keeping

See Section 8.0 Record Keeping and Reporting Requirements.

PERC Storage

Store all PERC and waste containing PERC in sealed containers. See Section 3.5 Store Dangerous Wastes and Materials Properly.

PERC Recovery

- ❖ For a refrigerated condenser on the vent: Be sure the temperature in the outlet of the refrigerated condenser is not above 45 degrees Fahrenheit.
- ❖ For a refrigerated condenser on the vent from the washer in transfer equipment: Be sure the difference between the inlet and outlet temperatures of the refrigerated condenser is greater than 20 degrees Fahrenheit.
- ❖ For an activated carbon adsorber on the vent: Measure the PERC concentration in the outlet from the adsorber with a colorimetric detector tube or hand-held detector when you do your weekly leak inspections and while the equipment is in use. It must be less than 100 parts per million. If the PERC concentration is higher than that, the carbon in the adsorber needs to be regenerated or replaced. The activated carbon is a dangerous waste when you decide to dispose of it. (See Section 3.7 Transport and Dispose of Dangerous Waste Properly.)

Section 3.0 **Dangerous Wastes and Materials**

Dangerous wastes and materials must not be put in the garbage or discharged into the sewer. Only rest room or hand washing waste water and laundering waste water that has not been contaminated with dry cleaning solvent may be disposed of in a municipal sewer system. Only restroom or hand washing water may be disposed of in a septic system.

Handle dangerous wastes in a manner that prevents leaks, spills and explosions, as described in this section. Develop and follow a written operating plan. Your operating plan should include an inspection schedule for all dangerous waste storage areas, containers and tanks; and procedures for emergencies, safety and monitoring of equipment. See Section 7.4 Emergency Planning for more information.

Old supplies such as spotting chemicals and laundry materials that you no longer use should be disposed of. An inspector may determine that they are "accumulated" dangerous wastes, and you may be in violation of waste storage requirements unless you can show clearly when, where and how you plan to use them. Check the labels and MSDS to see if they are dangerous materials. If so, dispose of them as prescribed in this section. If they are not dangerous materials, they may be disposed of in the trash.

Section 3.1 Identify Your Dangerous Wastes

Any waste that is toxic, corrosive, flammable or explosive is a dangerous waste, as is anything contaminated with PERC. Some petroleum dry cleaning solvents *do not* become dangerous wastes, unless contaminated with dangerous wastes from items like industrial shop towels.

Common dangerous wastes present at PERC dry cleaning facilities are:

- Filters
- Filter coatings
- Still bottoms
- Discarded solvent
- Some spotting solutions when discarded
- Activated carbon that will not be regenerated
- Muck
- Separator water
- · Solvent-contaminated lint
- Sludge
- Cleanup materials from PERC solvent spills

^{*} Separator water is a dangerous waste and must not be disposed of in sewer systems or septic tanks. See Section 4.0 Separator Water for more information.

Section 3.2 Count Your Dangerous Wastes

All dry cleaners must count and record their dangerous wastes in pounds toward a monthly total. (See common dangerous wastes listed in Section 3.1 above.) If you have questions about how to count your dangerous wastes, see Appendix A.1.1 for whom to contact in your area.

If the solvent you use forms a dangerous waste (for example, PERC), include in your dangerous waste total: (1) the amount of PERC in the equipment reservoir at the end of each month; and (2) the amount of PERC added during the month, unless you meet all of the following conditions:

- ❖ The PERC still and filters are completely enclosed and connected directly to the dry cleaning machine.
- Any air leaving the equipment during the drying cycle passes through a solvent capture device such as a condenser or activated carbon unit.
- ❖ All dangerous wastes, including separator water, are disposed of in accordance with dangerous waste regulations (see Section 3.7 Transport and Dispose of Dangerous Waste Properly).

Section 3.3 Identify Your Generator Status

All dry cleaners need to know whether they are a Regulated Generator (Medium Quantity Generator or Large Quantity Generator) or a Small Quantity Generator in order to know what requirements apply to them. Regulated Generators must meet more extensive and expensive requirements than Small Quantity Generators. For technical assistance on managing your dangerous wastes, contact your local dangerous waste agency (Appendix A.1.1) or Department of Ecology regional office (Appendix A.1.3).

Section 3.3.1 Small Quantity Generators

A dry cleaner is a Small Quantity Generator if:

- ❖ You always generate less than 220 pounds of dangerous waste per month; and
- ❖ You always dispose of your dangerous waste before it reaches 2,200 pounds on-site at any one time.

If a dry cleaner remains a Small Quantity Generator, it is easier and cheaper to manage wastes. The following requirements apply to Small Quantity Generators.

Small Quantity Generators are only required to ensure that dangerous wastes and materials are transported to an appropriate treatment, recycling, or disposal site, and may transport their dangerous wastes to such sites themselves.

Some county solid waste districts have drop-off sites for Small Quantity Generators. For more information on this, call your local dangerous waste agency (see Appendix A.1.1 for listing).

Whether you transport your dangerous waste yourself or hire a registered transporter, you must be sure that dangerous wastes are handled in one of two ways:

- They are treated, stored or disposed of at a permitted dangerous waste facility; or
- They are legitimately recycled or reclaimed by the facility to which they are delivered.

If you have someone else transport your wastes, this person must be a registered hazardous waste transporter. To make sure that the transporter has taken your waste to a proper dangerous waste facility or recycler, ask the receiving facility or recycler to send you a signed waste manifest, or call them to check if they received your waste.

Small Quantity Generators can also take their waste to

- ❖ Any permitted dangerous waste fixed facility or
- ❖ Local small quantity generator collection event that will accept it;

Section 3.3.2 Regulated Generators

A dry cleaner is a Regulated Generator if:

- ❖ You have ever generated more than 220 pounds of dangerous waste per month; or
- ❖ You have ever accumulated 2,200 pounds or more of dangerous waste.

Regulated Generators must meet more extensive and expensive requirements than Small Quantity Generators. A Regulated Generator can return to Small Quantity Generator status under the following conditions:

- ❖ If you became a Regulated Generator because you generated 220 pounds or more of dangerous waste in a month, you will be a Small Quantity Generator again when you reduce your dangerous waste generation to below 220 pounds per month.
- ❖ If you became a Regulated Generator because you accumulated 2,200 pounds of dangerous waste, you will be a Small Quantity Generator again when there is no dangerous waste left at your facility.

The following is required for Regulated Generators only. However, the measures described below are also <u>strongly</u> recommended for Small Quantity Generators.

Section 3.4 **Obtain a Generator Identification Number**

Regulated Generators must obtain an EPA/State RCRA site identification number. This identification number is used on Department of Ecology report forms.

For information about getting a site identification number (also known as a RCRA number), contact the Department of Ecology, (360) 407-6700.

Section 3.5 **Store Dangerous Wastes and Materials Properly**

For Regulated Generators, there are time limits on dangerous waste accumulation. See Section 3.6 Track Accumulation of Dangerous Wastes and Materials.

Regulated Generators must meet the following requirements for storing dangerous wastes and materials:

Section 3.5.1 Use Proper Containers

- Accumulate and store your dangerous wastes and materials in sturdy, leakproof, sealed and properly labeled containers. Acceptable containers include those made of polyethylene plastic, but only short term in the case of PERC or waste containing PERC (see next paragraph). Uncoated metal containers are not acceptable for PERC and PERC-containing wastes.
- ❖ Store all PERC and waste containing PERC in sealed containers. Plastic or coated metal containers are acceptable for short-term storage. However, PERC will deteriorate common plastics and cause exposed steel to rust. If you use plastic or metal buckets to store waste containing PERC, examine them frequently for deterioration and potential leaks. Otherwise, contact an

appropriate supplier for PERC resistant containers (see Appendix A.1.2. for a listing of vendors). Examples of wastes containing PERC are:

- Still bottoms
- Spent filters
- Any activated carbon that will not be regenerated
- Muck
- Separator water
- ❖ If filters are drained outside the filter housing, drain them into containers that are then sealed.
- ❖ Keep containers closed except when adding or removing materials.
- ❖ Keep a tight lid on your water separator. Run a vent line from it through a water trap to prevent evaporation of solvent vapors into the air.
- ❖ If you are collecting your separator water by letting your separator tank overflow drip into a bucket, the bucket must be kept covered to minimize evaporation. (A small hole in the cover to allow entry of the hose from the separator water tank is acceptable.) The bucket must not be allowed to overflow. Check it frequently.
- ❖ Store reactive and ignitable wastes and materials according to the Uniform Fire Code. Call your local fire marshal for information on these requirements.

Section 3.5.2 Label Containers Properly

All waste containers must be clearly labeled with the following information:

- The words "Dangerous Waste."
- ❖ The waste's major risk. For example, waste containing PERC or Valclene should be labeled "Toxic." Wastes containing petroleum solvent should be labeled "Ignitable."
- ❖ The date you started to fill the container with dangerous waste.

Section 3.5.3 **Store Waste and Materials in Proper Locations**

- Store dangerous wastes and materials indoors or under a covered and secured area. Do not store in alleys or parking lots.
- Establish and clearly mark an accumulation area.

If constructed after September 30, 1986, the accumulation area must have an impervious containment system capable of holding spills and leaks. Small Quantity Generators are strongly encouraged to have such containment also. Examples of acceptable containment systems include:

- A barrel to hold the main storage drum;
- A sealed concrete floor and curb around the dangerous waste drum; or
- A commercially available spill tank.

The containment system must be able to hold at least 10 percent of the maximum amount of dangerous waste you are capable of accumulating; or the volume of the largest container you use to hold dangerous waste, whichever is greater.

Section 3.6 Track Accumulation of Dangerous Wastes and Materials

If you are a Small Quantity Generator, you can hold dangerous waste indefinitely before shipping it, as long as you never store more than 2,200 pounds onsite. If you accumulate 2,200 pounds or more of dangerous waste, it must be disposed of in 180 days or less if you are a Medium Quantity Generator, and 90 days or less if you are a Large Quantity Generator. The 90 days or 180 days begin when you first start to store dangerous waste after having shipped out the previous batch.

Section 3.7 **Transport and Dispose of Dangerous Wastes Properly**

Do not discharge separator water or any other dangerous waste down the sewer or into septic systems, into any other drain, or onto the ground. Only rest room or hand washing waste water and laundering waste water that has not been contaminated with dry cleaning solvent may be disposed of in a municipal sewer system. Only restroom or hand washing waste water may be disposed of in a septic system. See Section 4.0 Separator Water for more information.

Small Quantity Generators must **ensure** that dangerous wastes and materials are transported to an appropriate treatment, recycling, or disposal site, and may transport their dangerous wastes themselves.

Whether you transport your dangerous waste yourself or hire a registered transporter, you must be sure that dangerous wastes are handled in one of two ways:

They are treated, stored or disposed of at a permitted dangerous waste facility; or

❖ They are legitimately recycled or reclaimed by the facility to which they are delivered.

If you have someone else transport your wastes, this person must be a registered hazardous waste transporter. To make sure that the transporter has taken your waste to a proper dangerous waste facility or recycler, ask the receiving facility or recycler to send you a signed waste manifest, or call them to check if they received your waste.

Small Quantity Generators can also take their waste to any permitted dangerous waste facility or local small quantity generator collection event that will accept it.

Regulated Generators must meet the following requirements for transporting and/or disposing of dangerous wastes:

- Regulated Generators must hire a transporter with a RCRA identification number. See Appendix A.1.2. for a listing of transporters.
- ❖ Any dangerous waste being transported must be:
 - Treated, stored or disposed of at a permitted dangerous waste facility; or
 - Legitimately recycled or reclaimed by the facility to which it is delivered.
- Regulated Generators must prepare a Uniform Dangerous Waste Manifest Form (manifest form) before having their wastes hauled away. Waste haulers for Regulated Generators must use a manifest and not just a bill of lading or receipt.
 - The manifest form must identify what the wastes are, who is transporting them and where they are going.
 - The manifest form goes with the wastes until they reach their final destination. It is then returned to the dry cleaner. The copy of the manifest form that is returned to you from the disposal facility is your documentation that your wastes were disposed of properly, and should be kept in your records (see Section 8.0 Record Keeping and Reporting Requirements).
- ❖ Dangerous wastes must be transported according to U.S. Department of Transportation regulations. For more information on this, call your local dangerous waste agency listed in Appendix A.1.1.

Section 3.8 Report Dangerous Wastes

Regulated Generators must submit a dangerous waste report by March 1 for the previous calendar year, even if you have not generated dangerous waste during that year. Report on the following Ecology forms: the General Site Information Form, the Generation and Management Form; and the Off-site Identification

Information Form. Examples of the Generation and Management Form are shown in Appendix A.4. An example is shown for each of the three most common types of dangerous waste.

Small Quantity Generator who has a RCRA identification number must submit a Verification Form by March 1 for the previous calendar year to report any changes to your business status.

For assistance on filling out and submitting reporting forms, contact your Ecology regional office (see Appendix A.1.3. for a listing).

Section 3.9 **Keep Proper Records of Dangerous Waste Activities**

See Section 8.0 Record Keeping and Reporting Requirements.

Section 4.0 Separator Water

PERC separator water is a dangerous waste. If you are collecting your separator water by letting your separator tank overflow drip into a bucket, the bucket must be kept covered to minimize evaporation. (A small hole in the cover to allow entry of the hose from the separator water tank is acceptable.) The bucket must not be allowed to overflow or spill. Check it frequently and clean up any spills promptly.

Do not discharge separator water or any other dangerous waste down the sewer, into any other drain or onto the ground. Only rest room or hand washing waste water and laundering waste water that has not been contaminated with dry cleaning solvent may be disposed of in a municipal sewer system. Only restroom or hand washing waste water may be disposed of in a septic system.

Two options are available to you for disposal of separator water:

Option 1:

Send your separator water to a proper dangerous waste facility or recycler by following the procedures described in Section 3.0 Dangerous Wastes and Materials.

Option 2:

- ❖ You may evaporate your separator water and vent it outside the building IF it has first been treated to reduce its PERC concentration to below 0.7 parts per million. A possible way to do this is:
 - Be sure you let the separator water stand long enough so that it is clear (in other words, you can see through it and it is not in any way "milky"); and
 - Be sure that the separator water has been separated from any PERC that
 may be in the bottom of the container in which you have been collecting
 the separator water; and
 - Pass the separator water through a granular activated carbon unit (using two units in series is strongly recommended) prior to evaporation. Be sure that **no** settled PERC enters the carbon units. The activated carbon units must be operated and maintained so that the separator water never exceeds 0.7 parts per million PERC concentration. For proper operation, filters should be exchanged according to the manufacturer's recommended frequency. Record the date of each change-out. You may wish to make this a part of the recordkeeping required by the air authorities. Keep these records onsite to demonstrate that the unit is properly maintained as required by the manufacturer.

Adding separator water to the cooling tower is the same as evaporating it, and the above treatment requirements apply to the separator water before it is added to the cooling tower. Do not add treated separator water to the boiler.

A list of vendors who may be able to provide information on equipment that will perform this treatment and evaporation is provided in Appendix A.1.2. Before purchasing any equipment, you should check with your local air pollution control agency for necessary approvals (see Appendix A.1.1 for a listing of local air pollution control agencies).

When selecting a treatment unit, you may wish to look for the following features that help to ensure adequate removal of PERC from the water before evaporation:

- The carbon filters are preceded by a settling reservoir having a drain at the bottom for recovering settled PERC. This reservoir will help to protect the filters from solvent that escapes from the separator.
- An alarm that signals when PERC has built up in the reservoir.
- Two carbon filters are used in series

If separator water is not treated to reduce its PERC concentration to below 0.7 parts per million, it must be handled, transported and disposed of in the same manner as any other dangerous waste (see Section 3.0 Dangerous Wastes and Materials).

Section 5.0 Trash, Garbage, and Solid Wastes

Section 5.1 **Identify Non-Dangerous Waste Materials**

Solid wastes are waste materials that are not listed as dangerous wastes on page 5. Solid wastes can be disposed of in the garbage or recycled.

Do not put the following materials in the trash:

- ❖ PERC sludge or filters
- ❖ Solvents or solvent-contaminated materials
- ❖ Anything that is toxic, corrosive, flammable or explosive

These materials are dangerous wastes and must be disposed of according to dangerous waste regulations, as described beginning on page 5.

Section 5.2 Recycle If Possible

Many non-dangerous waste materials that accumulate in dry cleaning operations can be recycled, reducing your garbage disposal costs. Examples of recyclable materials are:

- Cardboard and cardboard boxes
- Plastic containers and plastic film or wrap
- ❖ Metal and aluminum objects such as coat hangers
- Glass (rinsed clean)
- Used lubricating oil

Call your local solid waste/recycling agency listed in Appendix A.1.1 to find out where in your area the above items can be recycled; or call Ecology's Recycle Information Line at 1-800-RECYCLE (732-9253).

Section 6.0 Pollution Prevention

Pollution prevention activities are any actions you take that reduce emissions of pollutants or the generation of dangerous waste. Keep dated records of pollution prevention activities.

Preventing pollution can save businesses money in addition to benefiting human health and the environment. For example, by converting from transfer equipment to a closed loop dry-to-dry system, a dry cleaner can reduce solvent use by about 70 percent. This is a savings of about \$1,100 per year for a typical PERC dry cleaner.

Other examples of pollution prevention activities include:

- ❖ Be sure bulky items are completely dry before removing them. Do not finish-dry them outside the dry cleaning machine.
- ❖ If you have transfer equipment, don't open the washer until the wet articles can be immediately put into the dryer.
- ❖ Make your cartridge filters last:
 - Install a lint filter in front of them.
 - Make sure any additives you put in the solvent are completely dissolved before the solvent goes through the filter.
 - Keep the filter housing full of solvent when you are not using the equipment.
- ❖ When you run the still, do not let the solvent return temperature go above 90 degree Fahrenheit (32 degrees Centigrade). This will minimize solvent loss through the storage tank vent.
- Convert a vented dry-to-dry machine to closed loop to reduce air pollution emissions.
- * Replace an activated carbon adsorber PERC trap with a refrigerated condenser to reduce the generation of PERC-contaminated separator water.
- ❖ If you are buying a cleaning unit, consider one that uses non-hazardous petroleum solvent.
- ❖ If you are adding a cleaning unit, consider using a specialized wet cleaning process. These units can clean about 60 percent of fabric items, and do not generate a dangerous waste. Recent research by the EPA has shown wet cleaning systems to be a competitive alternative to using hazardous cleaning

solvents for many types of fabrics. The higher labor costs of wet cleaning are offset by its much lower equipment and supply costs. Extensive testing has shown a high level of customer satisfaction. Worker exposure to the potential health hazards of PERC are eliminated. Because wet cleaning is not used for fabrics that shrink or are hard to dry, it is convenient for use alongside existing equipment in shops which are expanding their volume of business.

- ❖ Be prepared for possible spills.
 - Have an emergency spill response plan.
 - Block off floor drains to help prevent potential spills from entering sewer systems, ground water, etc.
- Train employees on how to respond to different types of emergencies in your facility. See Section 7.4 Emergency Planning for more information.
- Train employees on operating practices that emphasize pollution prevention and environmental protection.

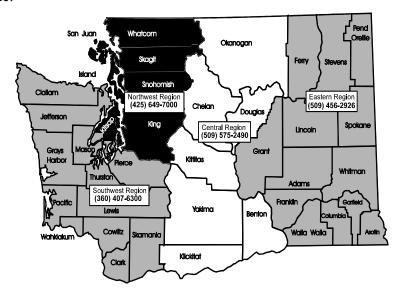
Dry cleaning trade publications, trade associations, product vendors and technical assistance staff at environmental agencies may be able to provide information on other possible pollution prevention actions. See the listing beginning on page 25 for contacts.

Loans for purchasing equipment for pollution prevention are now available from the Cascadia Revolving Fund. For loan information, call (206) 447-9226 and ask about the "pollution prevention lending project."

Section 7.0 **Spill Prevention and Response**

Section 7.1 Control Spills Immediately

- ❖ Immediately take the following actions to keep the spill from entering storm drains or sewers, spreading off-site or affecting human health:
 - Use absorbent materials to block storm water drains or gutters ahead of the spill.
 - Stay clear of the spilled material until qualified responders arrive on the scene.



- ❖ Call the Department of Ecology's Regional Office 24-hour Oil and Hazardous Material Spill Reporting number for your area (see below) to determine how serious the spill is. Do this for all spills unless there is no chance the spilled material will leak out of the building, no chance it will get into the sewer, and no danger to employees, customers, or neighbors.
- ❖ Immediately follow your emergency spill response plan for all spills. See below for a description of what should be in a spill response plan.
- ❖ If you do not have a spill response plan, prepare one and make sure it can be easily accessed by employees. This plan should include:
 - The telephone number of the Department of Ecology's Regional Office 24-hour Oil and Hazardous Material Spill Reporting line for your area;
 - The telephone number for the National Response Center;

- Telephone numbers of the local fire department and local health department; and
- Precautionary measures to be taken immediately following a spill to keep the spilled material from entering storm drains or sewers, spreading offsite or affecting human health. These measures include:
 - Use absorbent materials to block storm water drains or gutters ahead of the spill.
 - Stay clear of the spilled material until qualified responders arrive on the scene.

Section 7.2 **Dispose of Spill Cleanup Materials Properly**

If the spilled materials cannot be recovered for their intended use, they are waste materials. If they are waste and contain dry cleaning solvent or other dangerous materials, they must be accounted for, handled, and disposed of as described in Section 3 Dangerous Waste and Materials. If the spilled materials are not dangerous waste, they may be disposed of in the trash.

Section 7.3 Prevent Spills

- ♣ Handle dangerous materials or chemical storage in a manner that prevents leaks and spills.
 - Develop and follow a written operating plan which includes an inspection schedule for all dangerous waste storage areas and containers and tanks, and procedures for emergencies, safety and monitoring of equipment.
- Seal off floor drains around dry cleaning equipment and in storage areas used for dangerous materials.
- ❖ Seal all cracks in floors and coat them with material impervious to PERC and petroleum solvents. For information on applicable floor coating products, contact vendors of equipment, parts, and supplies listed in Appendix A.1.2.
- ❖ When possible, install secondary containment or absorbent materials around dry cleaning equipment and storage areas for PERC and dangerous waste.
- ❖ Store and keep ready spill response equipment such as absorbent materials or brooms in areas near dry cleaning equipment and storage areas for PERC and chemical or dangerous materials. Absorbent materials include kitty litter, "spill pigs," or vermiculite.

❖ Store solvents, bleach and supplies containing acids indoors in separate areas. The storage areas must be separated far enough so that the different materials cannot come into contact with each other in the event of an accidental spill.

Section 7.4 Emergency Planning

- ❖ Keep necessary emergency such as fire extinguishers and telephones on hand and accessible to employees.
- * Keep the telephone numbers of appropriate spill response agencies easily accessible.
- Regularly maintain and test all your emergency equipment.
- ❖ Have an emergency spill response plan to follow in the event of a spill. See Section 7.0 Spill Prevention and Response for information on what should be included in this plan.
- Notify police, fire departments and local hospitals of the characteristics of dangerous materials and waste at your site. Give them adequate location information and a drawing of your facility layout with access points clearly marked.
- Train employees on how to respond to different types of emergencies in your facility. You and/or an employee must act as the emergency coordinator. The emergency coordinator must be:
 - On-premises or on call at all times;
 - Familiar with the operations and activities of the facility; and
 - Authorized to commit resources necessary to deal with a dangerous waste emergency.

Section 8.0 Record Keeping and Reporting Requirements

You should keep the following records for at least 5 years:

- ❖ Notification of Dangerous Waste Activities (keep this for as long as you do business on a site)
- Annual dangerous waste reporting forms. Appendix A.2 provides information on waste codes to be used where needed on the forms for the following records and reports. Samples of record keeping and report forms provided in Appendix A.4.)
- * Records of inspections by regulatory agencies
- * Results from waste analyses or tests
- Waste shipment manifests
- * Records from emergency and spill plans, if required
- Reportable spills records
- Employee training records
- ❖ PERC dry cleaners must keep records of all PERC purchases and dangerous waste shipments. Every month, calculate and record the total amount of PERC purchases made during the past 12 months.

PERC Purchase Log								
MONTH OF PURCHASE	DATE OF ENTRY	AMOUNT (GALLONS)	RUNNING 12 MONTH TOTAL (GALLONS)					
April 2000	4/15/00	10	10					
May 2000			10					
June 2000	6/20/00	10	20					
July 2000			20					
Aug 2000			20					
Sep 2000	9/3/00	15	35					
Oct 2000			35					
Nov 2000	11/28/00	10	45					
Dec 2000			45					
Jan 2001			45					
Feb 2001	2/10/01	20	65					
Mar 2001			65					
April 2001	4/8/01	15	70					

For the April 2001 running 12-month total, subtract the April 2000 purchase from the March 2001 running total, and add the April 2001 purchase. In the above table, the 12-month running total for April 2000 through March 2001 is 65 gallons. The 12- month running total for May 2000 through April 2001 is 70 gallons.

- ❖ PERC dry cleaners must keep records of all equipment inspections done by the owner, employees, or other hired personnel. Record any leaks detected and other indications of maintenance and repair needs.
- ❖ PERC dry cleaners must keep records of all equipment maintenance and repair.

PERC dry cleaners must keep dated records of pollution prevention activities. See Section 6.0 Pollution Prevention for examples of activities.

Appendices

A.1 Who to Call

A.1.1 Who to Call for Compliance, Pollution Prevention and Technical Assistance

County	Air Quality Agency	Wastewater Agency	Solid Waste Agency and Recycling Information	Dangerous Waste Agency
Adams	Dept. of Ecology (509) 456-3114	Dept. of Ecology (509) 456-2926	Public Works (509) 659-3276	Public Works (509) 659-3276
Asotin	Dept. of Ecology (509) 456-3114	Dept. of Ecology (509) 456-2926	County Landfill (509) 758-1965	County Landfill (509) 758-1965
				Health District (509) 758-3344
Benton	Benton County Clean Air Authority (509) 575-2490	Dept. of Ecology (509) 575-2491	Engineering Dept. (509) 786-5611	Dangerous Waste (509) 786-5611
	(309) 373-2490			Environmental Health (509) 582-7761
Chelan	Dept. of Ecology (509) 752-2491	Dept. of Ecology (509) 575-2491	Public Works (509) 664-5415	Public Works (509) 664-5415
				Health District (509) 866-6450
Clallam	Olympic Air Pollution Control Authority (360) 438-8768	Dept. of Ecology (360) 407-6300	Public Works (360) 457-0411	Dept. of Community Development (360) 452-7831
Clark	Southwest Clean Air Agency (360) 574-3058	Dept. of Ecology (360) 407-6300	Solid Waste and Recycling (360) 397-6118	Southwest Washington Health District (360) 696-8428
Columbia	Dept. of Ecology (509) 456-3114	Dept. of Ecology (509) 456-2926	County Engineers (509) 382-2534	Walla Walla County Regional Planning (509) 527-3282
				Health Dept. (509) 382-2181
Cowlitz	Southwest Clean Air Agency (360) 574-3058	Dept. of Ecology (360) 407-6300	Public Works (360)-577-3125	Public Works (360) 577-3125
	(300) 37 4-3030			Health District (360) 414-5586
Douglas	Dept. of Ecology (509) 575-2490	Dept. of Ecology (509) 575-2491	Solid Waste (509) 886-0899	Health District (509) 866-6450
Ferry	Dept. of Ecology (509) 456-3114	Dept. of Ecology (509) 456-2926	Public Works (509) 775-5217	Public Works (509) 775-2492
				N.E. Tri-County Health District (509) 684-2262

County	Air Quality Agency	Wastewater Agency	Solid Waste Agency and Recycling Information	Dangerous Waste Agency	
Franklin	Dept. of Ecology (509) 456-3114	Dept. of Ecology (509) 456-2926	Public Works (509) 545-3514	Public Works (509) 545-3514	
				Benton-Franklin Health District (509) 582-7761	
Garfield	Dept. of Ecology (509) 456-3114	Dept. of Ecology (509) 456-2926	Engineering Dept. (509) 843-1301	Engineering Dept. (509) 843-1301	
				Health District (509) 843-3412	
Grant	Dept. of Ecology (509) 456-3114	Dept. of Ecology (509) 456-2926	Public Works (509) 754-2011 x422	Public Works (509) 754-2011	
				Health District (509) 754-6060 x3283	
Grays Harbor	Olympic Air Pollution Control Authority (360) 438-8768	Dept. of Ecology (360) 407-6300			
Island	Northwest Air Pollution Authority 1-800-622-4627	Dept. of Ecology (425) 649-7000	Solid Waste (360) 679-7340	Public Works (360) 679-7386	
				Health District (360) 679-7350	
Jefferson	Olympic Air Pollution Control Authority (360) 438-8768	Dept. of Ecology (360) 407-6300	Solid Waste (360) 385-9178	Public Works (360) 379-9178	
				Health District (360) 385-9436	
King	Puget Sound Clean Air Agency (206) 343-8800 or	Metro/King County (206) 689-3000	King County Solid Waste (206) 296-4484	Business Waste Line (206) 296-3976	
	1-800-552-3565	Dept. of Ecology (425) 649-7000	Seattle Solid Waste (206) 684-7655		
Kitsap	Puget Sound Clean Air Agency (206) 343-8800 or	Dept. of Ecology (425) 649-7000	Solid Waste (360) 895-4898	Public Works 1-800-825-4940	
	1-800-552-3565			Health District (360) 692-3611	
Kittitas	Dept. of Ecology (509) 575-2491	Dept. of Ecology (509) 575-2491	Public Works (509) 962-7577	Solid Waste (509) 962-7577	
Klickitat	Dept. of Ecology (509) 575-2491	Dept. of Ecology (509) 575-2491	Solid Waste (509) 773-4448	Public Works (509) 773-4448	
				Health Department (509) 773-4565	

County	o to Call for Complia	Wastewater Agency	Solid Waste Agency and Recycling Information	Dangerous Waste Agency		
Lewis	Southwest Clean Air Agency (360) 574-3058	Dept. of Ecology (360) 407-6300	Solid Waste (360) 740-1452	Solid Waste (360) 740-1452		
				Health District (360) 740-1238		
Lincoln	Dept. of Ecology (509) 456-3114	Dept. of Ecology (509) 456-2926	Health District (509) 725-2501	Planning Dept. (509) 725-7911		
				Health District (509) 725-2501		
Mason	Olympic Air Pollution Control Authority (360) 438-8768	Dept. of Ecology (360) 407-6300	Community Development (360) 426-9731	Community Development (360) 426-9731		
	(000) 100 07 00			Health (360) 427-9670		
Okanogan	Dept. of Ecology (509) 575-2490	Dept. of Ecology (509) 575-2491	Public works (509) 422-2602	Public works (509) 422-2602		
				Health District (509) 422-7141		
Pacific	Olympic Air Pollution Control Authority (360) 438-8768	Dept. of Ecology (360) 407-6300	Health District (360) 875-9356	Health and Human Services (360) 875-9356		
Pend Oreille	Dept. of Ecology (509) 456-3114	Dept. of Ecology (509) 456-2926	Public Works (509) 447-4513	Public Works (509) 447-4513		
				N.E. Tri-County Health District (509) 684-2262		
Pierce	Puget Sound Clean Air Agency (206) 343-8800 or 1-800-552-3565	Dept. of Utilities (253) 565-3013 Dept. of Ecology (360) 407-6300 Tacoma: (253) 591-5581	Solid Waste and Recycling (253) 593-4656	Health Dept. (253) 798-6500		
San Juan	Dept. of Ecology (425) 649-7000	Dept. of Ecology (425) 649-7000	Solid Waste (360) 378-2114	Solid Waste (360) 378-3421		
				Health District (360) 378-4474		
Skagit	Northwest Air Pollution Authority 1-800-622-4627	Dept. of Ecology (425) 649-7000	Public Works (360) 336-9400	Public Works (360) 336-9400		
	1 000-022-4021			Health District (360) 336-9380		
Skamania	Southwest Clean Air Agency (360) 574-3058	Dept. of Ecology (360) 407-6300	Public Works (509) 427-9456	S.W. Washington Health Distric (360) 696-8428		

County Air Quality Agency		Wastewater Agency	Solid Waste Agency and Recycling Information	Dangerous Waste Agency
Snohomish	Puget Sound Clean Air Agency (206) 343-8800 or	Dept. of Ecology (425) 649-7000	Solid Waste (425) 388-6484	Solid Waste (425) 388-6484
	1-800-552-3565		Everett (206) 257-8800	Health District 4256) 339-5250
Spokane	Spokane County Air Pollution Control Authority (509) 477-4727	Dept. of Ecology (509) 456-2926	Solid Waste (509) 625-6529	Solid Waste (509) 625-7898
				Health District (509) 324-1577
Stevens	Dept. of Ecology (509) 456-3114	Dept. of Ecology (509) 456-2926	Public Works (509) 738-6937	Public Works (509) 788-6937
				N.E. Tri-county Health District (509) 684-2262
Thurston	Olympic Air Pollution Control Authority (360) 438-8768	Dept. of Ecology (360) 407-6300	Water and Waste Management (360) 786-5136	Public Health (360) 754-4663
	(300) 430-0700		(300) 700-3130	Health Dept. (360) 795-6500
Wahkiakum	Southwest Clean Air Agency (360) 574-3058	Dept. of Ecology (360) 407-6300	Public Works (360) 795-3301	Public Works (360) 577-3125
				Health Dept. (360) 795-6207
Walla Walla	Dept. of Ecology (509) 456-3114	Dept. of Ecology (509) 456-2926	Regional Plan Office (509) 527-3282	Regional Plan Office (509) 527-3282
				Health Dept. (509) 527-3290
Whatcom	Northwest Air Pollution Authority 1-800-622-4627	Dept. of Ecology (425) 649-7000	Public Works (360) 676-6802	Bellingham (360) 676-6724
Whitman	Dept. of Ecology (509) 456-3114	Dept. of Ecology (509) 456-2926	Public Works (509) 397-6210	Public Works (509) 397-6280
				Health District (509) 397-6280
Yakima	Yakima Regional Clean Air Authority (509) 574-1410	Dept. of Ecology (509) 575-2491	Solid Waste Division (509) 575-2450	Public Works (509) 575-2450
	Or			Health Dept. (509) 575-4040
	1-800-572-7354 x1410			City of Yakima (509) 575-6005

A.1.2 Services and Vendors for Dry Cleaners

PLEASE NOTE: Businesses may change frequently. This was the most up-to-date listing available at the time of printing. This list is not inclusive. You may find further listings in the phone book. This list is for your convenience only. No recommendations or approvals are implied.

only. No recommendations or approvals are implied.							
Name and Phone Number	Equipment	Parts	Supplies	Solvents	Service	Haz. Waste Disposal	Specialty (if any)
Northwest Dry Cleaners Assoc. (253) 851-6327	Trade organization						
Korean Dry Cleaners Association Jae-Yong Lee (425) 868-4868	Trade o	rganizati	on				
International Fabricare Institute (301) 622-1900	Trade o	rganizati	on				
Adco, Tukwila WA (206) 244-4110			Х				
Alliance Commercial Equipment Salt Lake City UT 1-800-331-1136	Х						
American Laundry Machinery Cincinnati OH (513) 731-5500	Х						
Arent Machinery Co., Inc. Clackamas OR 1-800-547-2527	Х						
Ashland Chemical La Center WA 1-800-523-2190				х			
CESCO Seattle WA (206) 824-9055	Х				Х		
ChemCentral Kent WA (425) 251-8500 Spokane (509) 534-0519				х			
ChemSafe Environmental Kittitas WA (509) 968-3973						Х	
Chemical Waste Management Seattle WA 1-800-843-3604						Х	
Dynamic Laundry Systems Woodinville WA (425) 823-4300	Х				Х		

Services and Vendors for Dry Cleaners

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only. No recommendations or app	novais ai	e implied	I.	1	ı	1	
Name and Phone Number	Equipment	Parts	Supplies	Solvents	Service	Haz. Waste Disposal	Specialty (if any)
Envirotech Systems Inc. Seattle WA 1-800-922-9395						Х	
Environmental Technologies and Solutions, Inc., Miami, FL 1-800-404-0443	Х						Filtersafe and Quick Evap separator water treatment system
Evaporation Technology Internat'l Encinitas, CA 1-888-382-7672	Х						Separator water treatment system
Hill Equipment Co. Oklahoma City OK (405) 943-9773	Х	х					Dry-to-dry petroleum solvent dry cleaning equipment
Hoyt Corp. Westport MA (508) 636-8811	Х						
Kent Thomas Supply Salt Lake City UT (801) 467-3665	Х	х				х	
Kim's Plumbing and Equipment Seattle WA (206) 246-5919					Х		
Kleen-Rite Hydro-Mist St. Louis, MO 1-800-805-5186	Х						Separator water treatment equipment
Lab Safety (800) 356-0722			х				PERC leak detection tools: Drager tubes, halogen detectors, calorimetric detector tubes
Lind Laundry Systems Lynnwood WA (425) 775-8294	Х				x		
Olympic Cleaning Equipment Co. Federal Way WA (253) 529-1301	Х	Х			х		
Peterson Equipment Co. Woodburn OR (503) 981-4032 1-800-981-4032	Х				х		

Services and Vendors for Dry Cleaners

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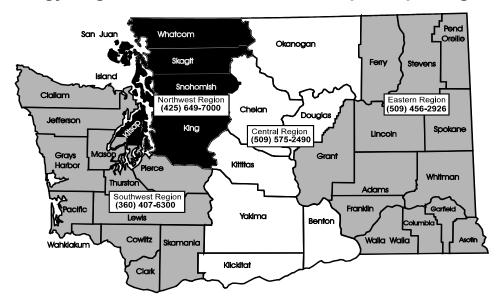
Name and Phone Number	Equipment	Parts	Supplies	Solvents	Service	Haz. Waste Disposal	Specialty (if any)
Phillips Environmental Seattle WA 1-800-228-7872 Washougal 1-800-547-2436						Х	Will accept small quantity generator dropoff
Quality Cleaning Fluids & Mfg. 1-800-708-2070	Х						Galaxy mister
Safety Kleen Corp. Auburn: (253) 939-2022 Lynnwood: (425) 775-7030 Spokane: (509) 928-8353	х					x	Waste disposal and recycling; Model 37 equipment for separator water treatment
Sanderson Safety Seattle: (206) 340-4300 Bellingham: (360) 734-1110			X				PERC leak detection tools: Drager tubes, halogen detectors, calorimetric detector tubes
Therm-O-Tek Industries Pahrump, NV 1-800-805-8656	х						
Unipress Corp Tampa FL (813) 623-3731	х	Х			х		
Van Waters and Rogers Seattle WA (253) 872-5000				Х		Х	Petroleum solvents
Vic Manufacturing Minneapolis MN (612) 533-7726	х						
Washex Machinery Corp. Wichita Falls TX (940) 855-3990	Х						

Services and Vendors for Dry Cleaners

PLEASE NOTE: Businesses may change frequently. This was the most up-to-date listing available at the time of printing. This list is not inclusive. You may find further listings in the phone book. This list is for your convenience only. No recommendations or approvals are implied.

Name and Phone Number	Equipment	Parts	Supplies	Solvents	Service	Haz. Waste Disposal	Specialty (if any)
Wesport Spokane WA (509) 922-4887	Х		Х				
Western Cascade Equipment Co. Bellevue WA (425) 562-9400	Х				Х		
ZeroWAste Santa Monica CA (310) 395-3888	Х	Х					Separator water evaporator

A.1.3 Ecology Regional Offices and 24-Hour Spill Reporting Numbers



❖ TDD (only)

ERO	(Spokane)	(509) 458-2055
SWRO	(Lacey)	(360) 407-6306
NWRO	(Bellevue)	(425) 649-4259
CRO	(Yakima)	(509) 454-7673
Kennewick	(Hanford)	(509) 736-3039

Or Call:

Dept. of Emergency Management 24-Hour Number: 1-800-258-5990

❖ For EPA and US Coast Guard Reporting, Call:

National Response Center:		1-800-424-8802
Idaho:	Communications Center	(208) 327-7422
Oregon:	Emergency Management	(503) 334-4570
B.C.:	Provincial Emergency Program	1-800-663-3456
EPA Region X. Seattle:		(800) 424-4372

Need to Know

(i.e. dead fish)

Reporting Party	Quantity
Contact Phone(s)	Concentration
Responsible Party	Location
Material Released	Cleanup Status
Resource Damages	

A.2 Identifying Your Dangerous Wastes

Waste Stream Description	Waste Codes
Cartridge filters, spent activated carbon, and activated carbon filters from PERC ¹ dry cleaners	F002
Muck, still bottoms, lint, and filter coatings from PERC dry cleaners	F002
Waste water containing PERC	F002
Used PERC ²	F002
Cleanup materials from spills of unused PERC	U210
Wastes from dry cleaners using petroleum solvent ³ :	D001 ⁴
Partially filled solvent containers Used solvent	D001 ⁴
Separator water from petroleum solvent dry cleaners	Have it tested
Wastes similar to the above and separator water from dry cleaners using CFC-113 as their cleaning solvent	WP01

¹ PERC is short for perchloroethylene, also called tetrachloroethylene

² See Step 1 under General Dangerous Waste Requirements in this manual to determine if you must count the PERC in your equipment reservoir.

³ Petroleum solvent includes dry cleaning solvents known as petroleum naphtha, mineral spirits, or Stoddard solvent as well as other commercial names. Check the material safety data sheet for the solvent to confirm its identity.

⁴ D001 applies only to petroleum solvent with a flashpoint of 140 degrees F or less. Recycled petroleum solvent may also contain a significant amount of PERC as a contaminant, which would change the waste designation.

A.3 Recommended Maintenance Schedule for Dry Cleaners

	HOW OFTEN								
COMPONENT	DAILY	WEEKLY	MONTHLY	OTHER					
All fittings, welds, gaskets and seals	Daily recommended: Check for liquid leaks, sometimes indicated by brown stains	Weekly required: Check for liquid leaks, sometimes indicated by brown stains							
Dry-to-dry machine cylinder		Leak check door openings and gaskets	Leak check exhaust damper (vented machines)						
Transfer washer/ ex-tractor		Leak check door openings and gaskets							
Transfer dryer/ re-claimer		Leak check door openings and gaskets	Leak check exhaust damper						
Heating and condensing coils			Check for lint buildup	Annually: Clean coils					
Button Trap	Clean strainer	Check lid for leaks							
Fan				Annually: Check for lint buildup and need for lubrication					
Lint traps	Clean lint bag	Dry clean or launder lint bag	Check ductwork for leaks						
			Check lint buildup on temperature probe						
Filters		Clean any lint filters in the air stream		Manufacturer's schedule: Drain spent cartridge filters in their housings for at least 24 hours					
Still and muck cooker		Leak check seals and gaskets		Every six months: Clean steam and condensation coils					
Water separator		Clean separator tank	Check vent						
External refrigerated condenser	Clean lint filters	Measure temperatures as described in the PERC dry cleaner requirements of this manual	Check refrigerant coils for lint	Annually: Clean coils					
		Leak check seals, gaskets and diverter valve							
Carbon absorber	Clean lint filters	Leak check seals, gaskets, and ductwork							
	Daily or before saturation: Steam or heat cycle to remove PERC	Measure exhaust PERC concentration as described in the PERC dry cleaner requirements of this manual							

The following pages are examples of how to fill out the Annual Dangerous Waste Report and the Generation and Management Form. Fill out one Generation and Management form for each type of waste you are reporting on. The three examples given are for: (1) PERC filters; (2) PERC separator water; and (3) PERC muck, still bottoms, and filter coatings.

These are examples only -- you will need to insert the correct amount for your specific dry cleaning business. For help, or information on workshops for generators, call 1-800-ARFORMS.

A.4 Dry Cleaner 2000 Annual Reporting Example

February 27, 2001

I am a Dry Cleaner. During 2000 I generated enough perchloroethylene waste to be considered a Regulated Generator. I recycle my perchloroethylene waste on-site by doing filtration/distillation in a closed-loop recycling system. As a result of this recycling, the only dangerous wastes that count towards my generator status and need to be reported on my Annual Dangerous Waste Report Forms GSI, GM, and OSI are the three perchloroethylene residual waste streams (as shown below). I have these residuals picked up regularly for off-site management by my Treatment Storage Disposal Recycling (TSDR) facility.

Note: The following waste amounts have been calculated two ways, monthly generation for determining generator status and yearly generation for annual reporting.

Used solvent that is recycled in an attached still does not need to be counted or reported.

Residuals sent off-site to TSDR (reportable waste):

- 1. Perchloroethylene filters = approx. 50 lbs/month = 600 lbs/year. (50 lbs/month x 12 month/year = 600 lbs/year)
- 2. Perchloroethylene separator water = approx. 20 gal/month (20 gal/month x 8.34 lbs/gal = 167 lbs/month) (167 lbs/month x 12 month/year = 2004 lbs/year)
- 3. Perchloroethylene muck, still bottoms and filter coatings approx. 12 gal/month

(12 gal/month x 1 1/3 lbs/gal = 156 lbs/month) (156 lbs/month x 12 month/year = 1872 lbs/year)

¹ WAC 173-307-200. "Closed-loop recycling" means that the entire process, through completion of any reclamation, is closed by being entirely connected with pipes or other comparable enclosed means of conveyance. Recycled materials are returned to the original process or processes.

GENERATION AND MANAGEMENT FORM

Answer Sheet

Please enter your EPA/State ID number and site name at right, before making as many two-sided copies of this answer sheet as you will need to report all of your waste streams. Then complete one answer sheet for each waste stream.

Please Enter:
EPA/State ID No.: WAD 123 456 789 Site Name: Happy Day Cleaners
FOR ECOLOGY USE ONLY
Date Received:

A. Description of Dangerous Waste Stream							
A-1							
A-2. Perchloroethylene	Filter						
A-3. <u>F002</u>			A-4				
A-5. X EHW DW	A-6 X No Yes		A-7. A <u>19</u>				
A-8. <u>B 407</u>	A-9	X v (if v, answ	er A-9.a.)				
		A-9.a. M <u>024</u>					
	B. Waste Management Ac	tivities					
B-1. <u>600</u> ST]	MT D D K .XG D L	C (If G, L,	or C, answer B-1.a.)				
	B-1.a	Specific Grav	rity ☐ lbs/yd³				
B-2. On-site	Off-site Both						
B-3 M	B-3.a. Yes No DK	B-3.b.	Yes No DK				
B-4. <i>i.</i> Receiving Facility ID	ii. System Code iii. Quant	ity	iv. Recycling Percent				
ORD 991834780	M <u>043 600</u>						
	M						
	M						
	M						

B-5. If additional space if required, use continuation sheet on the following page.						
(mm/dd)	Manifest ii Document Number	ii. Interna Tracking (optiona	g Code	<i>iv.</i> Rece Facili EPA/		v. Quantity Shipped
B-6. Yes No)					
	C. Waste	Minimiz	ation Act	ivities		
C-1. W W W	/ W		C-2. Yes No			
C-3			C-4			
D. Comments						
#A-8 Filters are bulk of halogenated organic solids						
#A-9a Filtration/distillation solvent recovery						
						_

GENERATION AND MANAGEMENT FORM

Answer Sheet

Please enter your EPA/State ID number and site name at right, before making as many two-sided copies of this answer sheet as you will need to report all of your waste streams. Then complete one answer sheet for each waste stream.

Please Enter:
EPA/State ID No.: WAD 123 456 789 Site Name: Happy Day Cleaners
FOR ECOLOGY USE ONLY
Date Received:

A. Description of Dangerous Waste Stream							
A-1	A-1						
A-2. Perchloroethylene	Separator Water						
A-3. <u>F002</u>			A-4				
A-5 EHW DW	A-6 X No Yes		A-7. A <u>19</u>				
A-8. <u>B 101</u>	A-9	iv . X v (if v, answ	er A-9.a.)				
		A-9.a. <u>M 024</u>					
	B. Waste Manageme	ent Activities					
B-1. <u>240</u> ST I	MT	L C (If G, L,	or C, answer B-1.a.)				
	—————————————————————————————————————	◯ lbs/gal ☐ Spec	ific Gravity				
B-2. On-site	Off-site						
B-3 M	B-3.a. Yes No	☐ DK B-3.b. ☐	Yes No DK				
B-4. <i>i.</i> Receiving Facility ID	ii. System Code iii.	Quantity	iv. Recycling Percent				
ORD 991834780	M <u>021</u> <u>240</u>	0	1				
	M						
	M						

B-5. If additional space if required, use continuation sheet on the following page.					
i. Date Shipped ii (mm/dd)	i. Manifest Document Number	iii. Internal Tracking Code (optional)	<i>iv.</i> Receiving Facility EPA/State ID	v. Quantity Shipped	
	· · · · · · · · · · · · · · · · · · ·				
B-6. Yes N	lo				
C. Waste Minimization Activities					
C-1. W W W C-2.					
C-3	C-4	_			
D. Comments					
#A-9a Filtration/distillation solvent recovery					

GENERATION AND MANAGEMENT FORM

Answer Sheet

Please enter your EPA/State ID number and site name at right, before making as many two-sided copies of this answer sheet as you will need to report all of your waste streams. Then complete one answer sheet for each waste stream.

	Please Enter:
	EPA/State ID No.: WAD 123 456 789 Site Name: Happy Day Cleaners
	FOR ECOLOGY USE ONLY
l	Date Received:

A. Description of Dangerous Waste Stream			
A-1			
A-2. Perchloroethylene Muck, Still Bottoms and Filter Coatings			
		A-4	
A-6 X No Yes		A-7. A <u>19</u>	
A-9 🗌 i. 🔲 ii 🔲 iii	☐ iv . X v (if v, answ	ver A-9.a.)	
	A-9.a. <u>M 024</u>		
B. Waste Manag	ement Activities		
MT .XP K	G □ L □ C (If G, L,	or C, answer B-1.a.)	
B-1.a. <u>8.34</u> ☐ lb	os/gal Specific Grav	vity ☐ lbs/yd³	
☑Off-site ☐ Both			
B-3.a. Yes No	DK B-3.b.	Yes No DK	
ii. System Code	iii. Quantity	iv. Recycling Percent	
M <u>021</u>	144	44	
M			
M			
	Muck, Still Bottoms and A-6 X No Yes A-9 i. ii iii B. Waste Manag MT . X P K B-1.a. 8.34 III Off-site Both B-3.a. Yes No ii. System Code M 021 M M M	Muck, Still Bottoms and Filter Coatings A-6.	

B-5. If additional space if	f required, use continua	tion sheet on th	B-5. If additional space if required, use continuation sheet on the following page.				
(mm/dd) Do	lanifest iii. Interr ocument Track umber (option	ing Code F	Receiving acility PA/State ID	v. Quantity Shipped			
							
B-6. Yes No							
	C. Waste Minimization Activities						
C-1. W W W	W	C-2. Yes	☐ No				
C-3							
D. Comments							
#A-9a Filtration/distillatio	_						

A.5 Suggested Record Keeping Forms

A.5.1 PERC Purchase Log

For first 12 months of recordkeeping

Please note the following:

- 1. RUNNING TOTAL gives yearly consumption based on previous 12 months.
- 2. DATE OF ENTRY should be the first WORKING day of each month.
- 3. RUNNING TOTAL = Preceeding RUNNING TOTAL + current AMOUNT.
- 4. If purchases are made more than once a month, use the total amount purchased monthly.
- 5. After initial 12 months proceed to attachment C2. Attachment C1 is used only once.

	MONTH OF PURCHASE	DATE OF ENTRY	AMOUNT (GALLONS)	RUNNING TOTAL (GALLONS)
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

A.5.2 Perchloroethylene Dry Cleaner Equipment Inspection and Repair Log

This log provides room for three months of entries (six months for Small Area Sources). The first three columns must be completed even if no leaks are found. This sheet should be duplicated before use to provide for future logs.

The following components must be checked for PERCEPTIBLE leaks every week. (Every other week for Small Area Sources).

Solvent tanks and containers

Perceptible leaks are ones that are detectable by odor, visual observation such as pools or drops, and touch when passing fingers over equipment.

Hose and pipe connections
 Fitting, couplings, and valves
 Door gasket/seatings
 Filter gaskets/seatings
 Pumps
 Water separators
 Muck cookers
 Stills
 Exhaust dampers
 Diverter valves

11. Cartridge filter housings

	Name or Initials (optional)	Inspect Date (weekly or biweekly)	Leaky Component(s) (write "None" if no leaks are found)	Leaky Component(s) Location	Part Order Date	Part Rec'd Date	Repair Date
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							

A.5.3 Refrigerated Condenser Weekly Temperature Log

For a dry-to-dry machine, a dryer, or a reclaimer, measure the temperature on outlet side of refrigerated condenser.

DATE	INSPECTOR'S INITIALS	MACHINE NO.	TEMPERATURE	IS TEMPERATURE > 45° F?
				Yes / No
				Yes / No
				Yes / No
				Yes / No
				Yes / No
				Yes / No
				Yes / No
				Yes / No
				Yes / No
				Yes / No
				Yes / No
				Yes / No

If the temperature was greater than 45° F (7.2° C), attach a completed Correction Action form.

A.5.4 Carbon Adsorber Weekly PERC Concentration Log

Measure the concentration of the PERC in the exhaust duct after the carbon adsorber.

DATE	INSPECTOR'S INITIALS	MACHINE NO.	CONCENTRATION (PPM)	IS CONCENTRATION > 100 PPM?
				Yes / No
				Yes / No
				Yes / No
				Yes / No
				Yes / No
				Yes / No
				Yes / No
				Yes / No
				Yes / No
				Yes / No
				Yes / No
				Yes / No

If concentration is greater than 100 ppm, attach a completed Corrective Action form.

A.5.5 Corrective Action Form

Corrective Action Form			
Date of Initial Inspection			
Machine No			
Inspector			
Describe Problem:			
Are Parts Needed Yes No			
Date Ordered			
Date Received			
Date Installed			
Date Problem Corrected			
Explain:			

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